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ABSTRACT OF THE DISCLOSURE

A composite conductor comprises strands of conductor material forming a conductor bundle of generally rectangular shape, the strands being insulated from each other within the bundle. An insulating sleeve of homogeneous polymeric material surrounds the conductor bundle; the insulating sleeve also having a rectangular shape. The polymeric material of the sleeve is filled with at least one insulating filler material which conducts heat more efficiently than the polymer alone, and a coating of conductive material from a corona shield on the inner and outer surfaces of the insulating sleeve. By virtue of its construction and the materials it uses, the composite conductor provides a high efficiency winding for the stator of an electrical machine. The invention also includes a stator having a winding comprising the composite conductor and manufacturing methods for the composite conductor and the stator.

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